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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,729	03/29/2001	Hironori Yahagi	826.1721	4351

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EXAMINER

HONEYCUTT, KRISTINA B

ART UNIT	PAPER NUMBER
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2178

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/819,729

Applicant(s)

YAHAGI, HIRONORI

Examiner

Kristina B. Honeycutt

Art Unit

2178

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the Request for Continued Examination filed August 29, 2005.

This action is made Non-Final.

2. Claims 1-14 are pending in the case. Claim 14 has been added. Claims 1, 3, 9, 10, 11, 12, 13 and 14 are independent claims.

3. The rejections of claims 1-11 as being unpatentable over DeRose and the rejections of claims 12 and 13 as being anticipated by Abulleil have been withdrawn as necessitated by the amendment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 9-11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brintzenhofe et al. (U.S. Pub. No. 20050223320; publication date

October 6, 2005; filed May 31, 2005; continuation of application filed September 9, 1996) in view of Zeng et al. (U.S. Pub. No. 20020003906; publication date January 10, 2002; filed May 21, 2001; continuation of application filed September 22, 1998).

Regarding independent claim 1, Brintzenhofe discloses a document inputting device inputting information of a structured document that is written with a set of hierarchical elements, and composed of a plurality of records each including one element or more (Fig. 9, 13; Abstract) since Brintzenhofe teaches a document in figure 9 represented as a hierarchical tree in figure 13.

Brintzenhofe discloses combining elements and preserving relationships (p.7, para. 91; p.25, para. 247, 248) but does not disclose a joining device generating a new element by combining contents of elements relatively at a same position among two records or more of the structured document or a generating device generating a new record that includes the new element and inherits a relative position relationship of elements in two records or more. Zeng discloses combining elements at relatively the same position, creating a new element (Fig. 6, 7; p.2, para. 19, 20; p.3, para. 34). It would have been obvious to one of ordinary skill in the art, having the teachings of Brintzenhofe and Zeng before him at the time the invention was made, to modify combining elements as taught by Brintzenhofe to include creating a new element by combining elements at the same position as taught by Zeng, because combining elements at the same position to create a new element, as taught by Zeng (Fig. 6, 7;

p.2, para. 19, 20; p.3, para. 34), creates a more concise hierarchical structure of the document.

Brintzenhofe discloses converting a document and outputting the structured document (p.1, para. 6; p.4, para. 68) but does not disclose converting the structured document by replacing the two records or more with the new record, thereby decreasing the number of hierarchical elements of the structured document. Zeng discloses replacing multiple records with a new record which decreases the number of hierarchical elements (Fig. 6, 7; p.3, para. 34). It would have been obvious to one of ordinary skill in the art, having the teachings of Brintzenhofe and Zeng before him at the time the invention was made, to modify document conversion as taught by Brintzenhofe to include decreasing the number of elements by replacement as taught by Zeng, because replacing multiple records with a new record, as taught by Zeng (Fig. 6, 7; p.3, para. 34), would create a more concise hierarchical structure of the document.

Regarding independent claims 9, 10, 11 and 14, the claims reflect the computer-readable storage medium on which is recorded a program, a propagation signal for propagating a program, a converting apparatus and a method for performing the operations of claim 1 and are rejected along the same rationale.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brintzenhofe in view of Zeng in further view of DeRose (U.S. Patent 6105044; date of patent August 15, 2000; filed July 13, 1999).

Regarding dependent claim 2, Brintzenhofe does not disclose a key inputting device inputting a search key or searching device searching the structured document after being converted with the search key, extracting a character string corresponding to a position of a detected character string from contents of an element in a certain record when the character string corresponding to the search key is detected from contents of another element in the certain record, restoring a record before being converted, which includes the search key, from the detected character string and the extracted character string, and outputting the restored record as a search result. DeRose teaches inputting a search key (col. 13, lines 34-37; col. 15, lines 29-35) and searching the document, extracting a string corresponding to a position of a detected string from contents of an element in a certain record when the string corresponding to the search key is detected from contents of another element in the certain record, restoring a record from the detected character string and the extracted character string, and outputting the restored record as a search result (col. 13, lines 34-37, 47-67; col. 14, lines 1-48; col. 17, lines 60-62). It would have been obvious to one of ordinary skill in the art, having the teachings of Brintzenhofe and DeRose before him at the time the invention was made, to modify document conversion as taught by Brintzenhofe to include search keys as taught by DeRose, because utilizing search keys, as taught by DeRose (col. 13, lines 34-37, 47-67; col. 14, lines 1-48; col. 15, lines 29-35; col. 17, lines 60-62), would allow uses to search for and convert specific elements of a document.

6. Claims 3-4, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brintzenhofe in view of Zeng in further view of Ardoin et al. (U.S. Pub. No. 20020099684; publication date July 25, 2002; filed May 7, 2001; continuation of application filed December 13, 1999).

Regarding independent claim 3, Brintzenhofe discloses a document inputting device inputting information of a structured document written with a set of hierarchical elements (Fig. 9, 13; Abstract) since Brintzenhofe teaches a document in figure 9 represented as a hierarchical tree in figure 13.

Brintzenhofe further discloses a storing device storing the information of the structured document (p.6, para. 83; p.28, para. 270).

Brintzenhofe further discloses a deleting device deleting an unnecessary original element (p.19, para. 194).

Brintzenhofe discloses combining elements and preserving relationships (p.7, para. 91; p.25, para. 247, 248) but does not disclose joining device generating a plurality of new elements by combining, as synthesis targets, content of each element included in a first combination of elements that successively exist side by side in a level immediately below a certain element and have a same element name, and content of each element included in a second combination of elements that have a same element name in a certain level lower than the elements of the first combination, elements in each level on a route from the elements of the first combination to the certain level having a same element name or generating a synthesized substructure that includes

the plurality of new elements, and inherits a relative position relationship of original elements among the plurality of new elements. Zeng discloses combining elements that exist side by side and have the same name to form a new substructure (Fig. 6, 7; p.2, para. 19, 20; p.3, para. 34). It would have been obvious to one of ordinary skill in the art, having the teachings of Brintzenhofe and Zeng before him at the time the invention was made, to modify combining elements as taught by Brintzenhofe to include combining elements at the same position with the same name as taught by Zeng, because combining elements of the same name at the same position to form a new substructure, as taught by Zeng (Fig. 6, 7; p.2, para. 19, 20; p.3, para. 34), would create a more concise hierarchical structure of the document.

Brintzenhofe discloses converting a document and outputting the structured document (p.1, para. 6; p.4, para. 68) but does not disclose converting the structured document using devices to decrease the number of hierarchical elements of the structured document. Zeng discloses using devices to replace multiple records with a new record which decreases the number of hierarchical elements (Fig. 6, 7; p.3, para. 34). It would have been obvious to one of ordinary skill in the art, having the teachings of Brintzenhofe and Zeng before him at the time the invention was made, to modify document conversion as taught by Brintzenhofe to include decreasing the number of elements by replacement as taught by Zeng, because replacing multiple records with a new record, as taught by Zeng (Fig. 6, 7; p.3, para. 34), would create a more concise hierarchical structure of the document.

Brintzenhofe does not teach a duplicating device generating a duplication of an unjoined element below a new element included in a synthesized substructure generated from an element higher than the unjoined element. Ardoin discloses a duplicating device generating a duplication of an element below another element included in a structure (p.36, para. 573). It would have been obvious to one of ordinary skill in the art, having the teachings of Brintzenhofe and Ardoin before him at the time the invention was made, to modify document conversion as taught by Brintzenhofe to include generating a duplication of an element as taught by Ardoin, because generating a duplicate unjoined element, as taught by Ardoin (p.36, para. 573), would provide two copies of the same element so that if changes are made to one, such as combining it with another element, the original element would still be available unchanged.

Regarding dependent claim 4, Brintzenhofe does not disclose generating the synthesized substructure if a combination of elements that successively exist side by side and have a same element name in two levels or more on the route to the certain level is not found. Zeng discloses generating a substructure if a combination of elements that exist side by side with the same name is not found (Fig. 6, 7; p.2, para. 19, 20; p.3, para. 34) since Zeng teaches, in the figures, some elements not existing side by side with the same name but a substructure being created anyway. It would have been obvious to one of ordinary skill in the art, having the teachings of Brintzenhofe and Zeng before him at the time the invention was made, to modify generating a substructure as taught by Brintzenhofe to include generating a

substructure if combinations are not found as taught by Zeng, because generating a substructure despite combinations being found, as taught by Zeng (Fig. 6, 7; p.2, para. 19, 20; p.3, para. 34), would still allow a more concise hierarchical structure of the document to be created.

Regarding independent claims 12 and 13, the claims reflect the methods for performing the operations of claim 3 and are rejected along the same rationale.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brintzenhofe in view of Zeng in further view of Ardoin in further in view of Alam et al. (U.S. Patent 6336124; date of patent January 1, 2002; filed July 7, 1999).

Regarding dependent claim 5, Brintzenhofe does not teach joining device divides the second combination of the elements into a plurality of groups each composed of a predetermined number of elements, and specifies the synthesis targets based on the predetermined number of elements included in each of the groups. Alam discloses dividing combinations into a plurality of groups composed of a predetermined number of elements (col. 15, lines 56-67; col. 16, lines 1-14). It would have been obvious to one of ordinary skill in the art, having the teachings of Brintzenhofe and Alam before him at the time the invention was made, to modify document conversion as taught by Brintzenhofe to include dividing elements into groups composed of a predetermined number of elements as taught by Alam, because dividing elements into groups of specific numbers

would allow elements to be displayed within the display parameter, as taught by Alam (col. 15, lines 65-67; col. 16, lines 1-3).

8. Claim 6-8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brintzenhofe in view of Zeng in further view of Ardoin in further in view of DeRose.

Regarding dependent claim 6, Brintzenhofe does not teach generating contents of the new elements by inserting a delimiter between the two joined contents. DeRose teaches generating contents of the new elements by inserting a delimiter between the joined contents (col. 11, lines 43-49). It would have been obvious to one of ordinary skill in the art, having the teachings of Brintzenhofe and DeRose before him at the time the invention was made, to modify document conversion as taught by Brintzenhofe to include inserting delimiters as taught by DeRose, because inserting delimiters to generate new elements, as taught by DeRose (col. 11, lines 43-49), would aid in preserving text relationships since the delimiters would be used to separate contents.

Regarding dependent claim 7, Brintzenhofe does not teach consecutively inserting the delimiter in the contents of new elements if content of an element which becomes the synthesis target is lacking. DeRose teaches consecutively inserting the delimiter in the contents of new elements if content of an element which becomes the synthesis target is lacking (col. 10, lines 65-67; col. 11, line 1). It would have been obvious to one of ordinary skill in the art, having the teachings of Brintzenhofe and DeRose before him at

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the time the invention was made, to modify document conversion as taught by Brintzenhofe to include inserting delimiters if content is lacking as taught by DeRose, because inserting delimiters to generate new elements, as taught by DeRose (col. 10, lines 65-67; col. 11, lines 1, 43-49), would aid in preserving text relationships since the delimiters would be used to separate contents.

Regarding dependent claim 8, Brintzenhofe does not disclose a key inputting device inputting a search key or a searching device comparing a character string between two delimiters, which is included in contents of elements within the structured document of the synthetic type, with a character string of the search key, obtaining an order of a delimiter preceding a character string corresponding to the search key when the character string corresponding to the search key is detected from contents of elements within a certain synthesized substructure, extracting a character string between a delimiter corresponding to the order and a next delimiter in contents of another element in the certain synthesized substructure, restoring a corresponding portion of the structured document before being converted from the detected character string and the extracted character string, and outputting the restored portion as a search result.

DeRose teaches inputting a search key (col. 13, lines 34-37; col. 15, lines 29-35) and comparing a string between two delimiters with a string of the search key, obtaining an order of a delimiter preceding a string corresponding to the search key when the string corresponding to the search key is detected, extracting a string between a delimiter corresponding to the order and a next delimiter in contents of another element in the

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substructure, restoring a corresponding portion of the structured document before being converted from the detected and extracted strings, and outputting the restored portion as a search result (col. 13, lines 34-37, 47-67; col. 14, lines 1-48; col. 17, lines 60-62; col. 18, lines 60-62). It would have been obvious to one of ordinary skill in the art, having the teachings of Brintzenhofe and DeRose before him at the time the invention was made, to modify document conversion as taught by Brintzenhofe to include search keys and delimiters as taught by DeRose, because utilizing search keys and delimiters, as taught by DeRose (col. 13, lines 34-37, 47-67; col. 14, lines 1-48; col. 15, lines 29-35; col. 17, lines 60-62), would allow users to search for and convert specific elements of a document and maintain text relationships.

Response to Arguments

9. Applicant's arguments filed August 29, 2005 have been fully considered but they are not persuasive. Regarding amended independent claims 1, 3, 9, 10, 11, 12, 13 and 14, Applicants indicate that neither DeRose, Li or Abulleil discuss combining contents of node elements of a structured document in a way that reduces or decreases the number of elements of the structured document while preserving a text relationship between the contents (p.7, para. 4-5). The amended claims have been rejected in view of Brintzenhofe, Zeng and Ardoin, who teach, in combination, combining contents of elements in a way that reduces the number of elements while still preserving the relationships among the contents.

Claims 2 and 4-8 depend from independent claims 1 and 3. Therefore claims 2 and 4-8 are rejected at least based on the rationale of the rejection above.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Method of clustering electronic documents in response to a search query. (U.S. Patent 6167397),
- Method for generating a software module from multiple software modules based on extraction and composition (U.S. Patent 6757887),
- System for decreasing the time required to parse a sentence (U.S. Patent 5475588),
- Method and system for performing proximity joins on high-dimensional data points in parallel (U.S. Patent 5884320),
- Dynamic, hierarchical data exchange system (U.S. Pub. No. 20020143774),
- Object-oriented representation of technical content and management, filtering, and synthesis of technical content using object-oriented representations (U.S. Patent 6405211).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristina B. Honeycutt whose telephone number is 571-272-4123. The examiner can normally be reached on 8:00 am - 5:00 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on 571-272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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